

CLAIMS

1. Method for manufacturing a clasp, particularly for wristwatch strap, from a metal strip (2), of the type comprising a main element (1) and at least one pivoting element (3), which are connected at one of their respective ends by an articulation, a flexion spring (11) fast with one of these elements (1, 3) being applied, at least in position of closure, on the other element (3, 1) in order to support it elastically in this position of closure, characterized in that it comprises the steps consisting in:

- using a strip (2) whose stiffness is the one desired for the spring (11),

- making, by cut-out, a blank (1', 3') of each of these elements (1, 3), so as to form on each of them at least two longitudinal arms (5), and on the main element (1) two recesses (9) inside the two arms (5) forming therebetween a central flexion spring (11),

- subjecting these arms (5, 13) to an annealing exclusively at their ends so as to allow rolling thereof,

- increasing the stiffness of these arms (5, 13) by making at least one rib (20, 22) along the longitudinal axis thereof.

2. Method according to Claim 1, characterized in that it comprises a step during which a blank band (12) is constituted from a strip constituted by a wound band (2), whose width corresponds to one of the dimensions of the element to be made,

each of the blanks (1', 3') constituting the blank band (12) being connected to the blanks which are adjacent thereto by at least one connecting tab (4).

3. Method according to Claim 2, characterized in that the blanks (1', 3') are disposed so that their longitudinal axis (xx') is oriented perpendicularly to the longitudinal axis (yy') of the blank band (12).

4. Method according to one of the preceding Claims, characterized in that the blank band (12) advances, along its longitudinal axis (yy'), in front of localized heating means (P₂) in zones (10) disposed on its transverse edges, so as to effect an operation of annealing on at least one longitudinal band (10) of the blank band (12).

5. Method according to one of the preceding Claims, characterized in that the localized heating means are constituted by a laser beam generator (P₂)

6. Method according to one of the preceding Claims, characterized in that, after the heating phase (II), an operation of rolling (III) is effected at the end of the arms of the elements, so as to constitute hinges (5, 7, 15, 8).

7. Method according to Claim 6, characterized in that two arms (13) of the same end of a pivoting element (3) are wound so as to constitute a double hinge (15), namely an inner hinge (15a) intended to receive a pivot pin (16) common with the

main element (1) and an outer hinge (15b) intended to receive a stop pin (18).

8. Method according to one of Claims 6 or 7, characterized in that it comprises a step consisting in welding the end of the arm, once the latter is wound, on the element on which it is constituted.

5 9. Method according to Claim 7, characterized in that this welding is effected by a laser beam generator.

10. Method according to one of the preceding Claims, characterized in that it comprises a step (IV) after the annealing operation (II), in the course of which longitudinal stiffening ribs (20, 22) are made on the arms (5, 13) of the main (1)
10 and pivoting (3) elements.

11. Method according to one of the preceding Claims, characterized in that it comprises a last phase (V) during which the tabs (4) for connection of the elements are eliminated.

12. Clasp, particularly for wristwatch strap, of the type comprising at least
15 two elements, namely a main element (1) and a pivoting element (3) which is mounted to pivot with respect to the latter by means of an articulation, characterized in that:

- each of these elements (1, 3) comprises at at least one of its ends two longitudinal arms (5, 13) whose ends are rolled up so as to constitute a hinge (7,
20 15) of said articulation,

- at least one of the ends of one of the elements (1, 3) comprises a flexion spring (11) adapted to come, at

least in position of use, in abutment against the other element (3, 1) so as to ensure elastic support thereof,

- each arm (5, 13) of the main (1) and pivoting (3) elements is provided with at least one longitudinal stiffening rib (20, 22).

5 13. Clasp according to Claim 12, characterized in that the flexion spring (11) is formed on the main element.

14. Clasp according to one of Claims 12 or 13, characterized in that the rolling of the arms (13) of that of the two elements which is not provided with the flexion spring (11) is double, so as to form, on the one hand, a first inner
10 hinge (15a) admitting the pivot pin (16) traversing the hinges of the articulation, and a second outer hinge (15b) intended to support a stop pin (18) disposed beyond the first pivot pin (16), towards the outside, and on which the flexion spring (11) comes into abutment when the clasp is in position of use.

15. Clasp according to one of Claims 12 to 14, characterized in that the ends
15 of the arms forming the hinges are connected by welding to each element on which they are formed.

16. Clasp according to one of Claims 12 to 15, characterized in that at least the element provided with the flexion spring (11) is constituted by a stainless steel having a high content of elements such as nickel, chromium, molybdenum,
20 cobalt, the sum of the contents of these elements being greater than 80%.